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David B. Palan

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EXAMINER

SANTIAGO CORDERO, MARIVELISSE

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/677,784

Applicant(s)

PALAN, DAVID B.

Examiner

Marivelisse Santiago-Cordero

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-32 and 34 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8, 10-32 and 34 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-8, 10-32, and 34 are pending.

Response to Arguments

2. Applicant's arguments filed on 2/6/06 have been fully considered but they are not persuasive. The objections/rejections not addressed below, have been withdrawn.
3. Regarding claim 1, in response to applicant's arguments that Kim does not disclose or suggest implementing either system 100 or Applicant's claimed system at a telephone company central office (See Remarks: page 15, lines 6-8), the Examiner respectfully disagrees. The term "telephone company central office" is broad enough as to read on Kim's element 100 as explained in the previous Office Action and repeated herein. Applicant's claim does not clearly and uniquely defies "telephone company central office" as to distinguish from the teachings of the applied prior art. Kim's element 100 is part of a telephone company and is performing as a central office because communications are controlled and routed through element 100.

In addition applicant argues that Kim teaches away (see Remarks: page 15, lines 10-15). In response, the question whether a reference "teaches away" from the invention is inapplicable to an anticipation analysis. See MPEP S 2131.05.

4. Regarding claims 10-13, Applicant argues that the combination of Kim and Applicant's admitted prior art is improper (See Remarks: pages 17-21). In response, Kim teaches an interfacing function as explained above and further explained in the previous Office Action. A point between the subscriber line interface circuit and the customer premises (Claim 11), a point between the subscriber line interface circuit and the telephone company central office (Claim 12), a concentrator (Claim 13), or a cable head-end (Claim 14), all contain an interfacing

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function because they interface the customer premises equipment with the PSTN (See Figs. 1, 2A, and 2B of originally filed specification). Therefore, either one or both of these functions in combination reads on the claimed interfacing function.

5. Regarding claim 22, Applicant argues that Kim does not teach providing applicant's claimed interfacing function at a telecommunication company's central office (See Remarks: page 21, lines 15-16). The Examiner respectfully disagrees for the same reasons as stated above. Moreover, Applicant argues that Kim teaches away (See Remarks: page 21, line 17). In response, at the outset, Applicant has not distinctively point out how the language of the claim patentably distinguishes from the reference. Applicant has presented a general allegation of patentability. In addition, the fact that Applicant has recognized other uses or advantages of Kim cannot be basis for patentability when the difference are obvious and the rejection is based on a combination of references. For example, Kim does teach a complete telephone network; therefore, an enabling infrastructure (See Kim: Fig. 1)

6. Applicant's arguments with respect to claims 4 and 6 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's amendment necessitated the new grounds of rejection presented in this Office Action. Accordingly, this Action is made FINAL.

Claim Objections

8. Claims 10-13 are objected to because of the following informalities: the "interfacing function" appears to be the interfacing step of claim 1, line 9. Appropriate correction is required.

9. Claims 22-27 are objected to because of the following informalities: the term "the first telecommunications company's facilities" (claim 22, line 10; claim 26, line 3; claim 27, line 3) is

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incorrect since applicant's amendment to line 2 of claim 22 cancelled the term "facilities".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-3, 5, 7-8, 14-21, 28-32, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (hereinafter "Kim"; WO 03/024071; cited in IDS).

Regarding claim 1, Kim discloses a method for use of local loop telephone lines that normally extend between a telephone company switch and multiple different customer premises, including a first local loop telephone line normally extending between the telephone company switch and a first customer premises (Fig. 1), and a second local loop telephone line normally extending between the telephone company switch and a second customer premises (Fig. 1), wherein the telephone company switch provides connectivity with a transport network (Fig. 1), and wherein the telephone company switch resides at a telephone company central office (Fig. 1), the method comprising the following steps:

at the telephone company central office, interfacing each of the local loop telephone lines with a respective wireless transceiver between the telephone company switch and the customer premises to which the local loop telephone line extends (Fig. 1, reference numerals 10a-10n); and

operating each wireless transceiver to communicate with a wireless access network (Fig. 1, reference numeral 300) that provides connectivity with the transport network (Fig. 1, reference numeral 200), so as to communicatively connect each local loop telephone line with the transport network without use of the telephone company switch (Fig. 1),

whereby (i) communications then flow between the first customer premises (Fig. 1, reference numeral 1a) and the transport network (Fig. 1, reference numeral 200) via a first communication path comprising the first local loop telephone line (Fig. 1, reference numeral 5), a first wireless transceiver (Fig. 1, reference numeral 10a), and the wireless access network (Fig. 1, reference numeral 300), and (ii) communications then flow between the second customer premises (Fig. 1, reference numeral 1b) and the transport network (Fig. 1, reference numeral 200) via a second communication path comprising the second local loop telephone line (Fig. 1, reference numeral 5), a second wireless transceiver (Fig. 1, reference numeral 10b), and the wireless access network (Fig. 1, reference numeral 300).

Regarding claim 2, Kim discloses the method of claim 1, wherein the wireless access network comprises a cellular telephone system having a base transceiver station (Fig. 1, reference numeral 310), a base station controller (Fig. 1, reference numeral 330), and a mobile switching center (Fig. 1, reference numeral 350) connected with the transport network (Fig. 1, reference numeral 200).

Regarding claim 3, Kim discloses the method of claim 2, further comprising: arranging each of the wireless transceivers to operate under a respective directory number in the cellular telephone system (page 3, 2nd paragraph).

Regarding claim 5, Kim discloses the method of claim 1, wherein each wireless transceiver operates under a respective directory number (page 3, 2nd paragraph), whereby a call placed via the transport network to a given directory number is routed to the wireless access network (Fig. 1; page 12, last paragraph), via the wireless network to a wireless transceiver operating under the given directory number (Fig. 1; page 12, last paragraph), and in turn via a given local loop telephone line to a given customer premises (Fig. 1; page 12, last paragraph; page 14, 2nd and last paragraphs).

Regarding claim 7, Kim discloses the method of claim 1, wherein interfacing each local loop telephone line with a respective wireless transceiver comprises: statically correlating the local loop telephone line with the respective wireless transceiver (from page 13, 3rd paragraph through page 14, 2nd paragraph).

Regarding claim 8, Kim discloses the method of claim 1, wherein interfacing each local loop telephone line with a respective wireless transceiver comprises: dynamically correlating the local loop telephone line with the respective wireless transceiver (page 13, 2nd paragraph).

Regarding claim 14, Kim discloses the method of claim 1, further comprising: concurrently (i) operating the first wireless transceiver to pass communications between the first customer premises and the transport network and (ii) operating the second wireless transceiver to pass communications between the second customer premises and the transport network (page 15, 4th-last paragraph).

Regarding claim 15, Kim discloses the method of claim 1, wherein interfacing each local loop telephone line with a respective wireless transceiver comprises: translating between (i) local loop signaling on the local loop telephone line and (ii) wireless-access-network signaling

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communicated between the respective wireless transceiver and the wireless access network (Fig. 1; from page 14, 2nd paragraph through page 15, 1st paragraph; page 20, 1st paragraph).

Regarding claim 16, Kim discloses the method of claim 15, wherein translating between local loop signaling and wireless-access-network signaling comprises translating between signaling to facilitate at least one enhanced telephone service selected from the group consisting of: caller-ID; call-waiting; conference calling; and message-waiting indication (Fig. 1; from page 14, 2nd paragraph through page 15, 1st paragraph).

Regarding claim 17, Kim discloses the method of claim 15, wherein interfacing each local loop telephone line with a respective wireless transceiver further comprises: emulating a local loop on the local loop telephone line (Fig. 1; from page 14, 2nd paragraph through page 15, 1st paragraph).

Regarding claim 18, Kim discloses the method of claim 15, wherein emulating a local loop comprises performing functions selected from the group consisting of: detecting an off-hook event; delivering a dial tone; detecting dialed digits; delivering a ring signal; delivering a busy signal; and detecting an on-hook event (Fig. 1; from page 14, 2nd paragraph through page 15, 1st paragraph).

Regarding claim 19, Kim discloses the method of claim 15, wherein interfacing each local loop telephone line with a respective wireless transceiver further comprises: receiving outbound voice communications from the local loop telephone line and passing the outbound voice communications to the respective wireless transceiver for transmission via the wireless access network to the transport network (Figs. 1 and 4; page 15, 4th paragraph); and receiving inbound voice communications that the respective wireless transceiver receives from the

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transport network via the wireless access network (Fig. 1; page 12, last paragraph), and passing the inbound voice communications to the local loop telephone line for transmission to the customer premises to which the local loop telephone line extends (from page 14, last paragraph through page 15, 1st paragraph).

Regarding claim 20, Kim discloses the method of claim 1, wherein the transport network comprises a public switched telephone network (Fig. 1, reference 200).

Regarding claim 21, Kim discloses the method of claim 1, further comprising carrying out operating step at a telephone company central office (Fig. 1, reference 100).

Regarding claim 28, Kim discloses a system (Fig. 1) comprising:

a telephone line interface (Fig. 1, reference numeral 30) comprising multiple ports configured to connect with telephone lines (Fig. 1, reference numeral 5) extending to multiple different customer premises locations (Fig. 1, reference numeral 1a-1n), including a first port configured to connect with a first telephone line extending to a first customer premises location and a second port configured to connect with a second telephone line extending to a second customer premises location (Fig. 1, reference numeral 30; note the customer premises 1a-1n);

a radio access network (RAN) interface (Fig. 1, reference numeral 10) communicatively linked with the telephone line interface (Fig. 1), the RAN interface comprising multiple RAN clients (Fig. 1, reference numeral 10a-10n) each configured to register on a RAN under a respective client identifier and to then operate under the respective client identifier when placing and receiving voice calls on a transport network via the RAN (Fig. 1, reference numeral 10a-10n; page 3, 2nd paragraph; page 12, last paragraph); and call-interface logic for bridging multiple voice calls concurrently between the RAN interface and the telephone line interface (Fig. 1,

reference numerals 21-25), so as to extend at least (i) a first voice call between the first customer premises location and the transport network via the first RAN client (Figs. 1 and 6) and (ii) a second voice call between the second customer premises location and the transport network via the second RAN client (Figs. 1 and 6), wherein the telephone line interface, the RAN interface, and the call-interface logic are cooperatively located at a telephone company central office (Fig. 1, reference 100), and wherein the telephone company central office further includes a switch operable to provide connectivity with the transport network (Fig. 1; reference 23).

Regarding claim 29, Kim discloses the system of claim 28, further comprising local loop emulation logic for emulating a local loop respectively on each telephone line (Fig. 1; page 10, last paragraph).

Regarding claim 30, Kim discloses the system of claim 28, integrated as a single apparatus (Fig. 1, reference numeral 100).

Regarding claim 31, Kim discloses a telecommunications system (Fig. 1) comprising: a telephone line interface (Fig. 1, reference numeral 30) configured to connect with a plurality of telephone lines (Fig. 1, reference numeral 5) that extend to respective customer premises locations (Fig. 1, reference numeral 1a-1n), wherein the telephone line interface emulates a local loop respectively on each telephone line (Fig. 1; page 10, last paragraph); a radio access network (RAN) interface (Fig. 1, reference numeral 10) communicatively linked with the telephone line interface (Fig. 1), the RAN interface comprising multiple RAN clients (Fig. 1, reference numeral 10a-10n) each configured to register on a RAN under a respective client identifier and to then operate under the respective client identifier to place and receive voice calls on a transport network (Fig. 1, reference numeral 200) via the RAN (Fig. 1, reference numeral 300; page 3, 2nd

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paragraph; page 12, last paragraph); and logic operative to bridge the RAN clients with the telephone lines (Fig. 1, reference numerals 21-25), so that voice calls from customer premises locations extend via the RAN to the transport network (Figs. 1 and 6) and voice calls from the transport network extend via the telephone lines to the customer premises locations (Figs. 1 and 5), wherein the telephone line interface, the RAN interface, and the logic are cooperatively located at a telephone company central office (Fig. 1, reference 100), and wherein the telephone company central office further includes a switch operable to provide connectivity with the transport network (Fig. 1; reference 23).

Regarding claim 32, Kim discloses the telecommunications system of claim 31, wherein at least a portion of the logic resides in a component selected from the group consisting of (i) a controller communicatively linked with both the telephone line interface and the RAN interface (Fig. 1, reference numeral 21), (ii) the telephone line interface (Fig. 1, reference numeral 30) and (iii) the RAN interface (Fig. 1, reference numeral 10).

Regarding claim 34, Kim discloses the telecommunications system of claim 31, integrated as a single apparatus (Fig. 1, reference numeral 100).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Ghoi et al. (hereinafter "Ghoi"; Patent No.: US 6,775,556).

Regarding claim 4, Kim discloses the method of claim 3 (see above). Kim fails to disclose wherein arranging each of the wireless transceiver to operate under a respective directory number in the cellular telephone system comprises: arranging a given wireless transceiver to operate under a directory number that is assigned to the local loop with which the given wireless transceiver is being interfaced.

However, in the same field of endeavor, Ghoi discloses wherein arranging each of the wireless transceiver to operate under a respective directory number in the cellular telephone system comprises: arranging a given wireless transceiver to operate under a directory number that is assigned to the local loop with which the given wireless transceiver is being interfaced (col. 9, lines 20-35).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to operate under a directory number of Kim that is assigned to the local loop with which the given wireless transceiver is being interfaced as suggested by Ghoi because

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it would be easier to operate, more convenient and would relieve the users from having to memorize different numbers.

Regarding claim 6, Kim discloses the method of claim 5 (see above). Kim fails to disclose further comprising: assigning equipment at the given customer premises to operate under the given directory number.

However, in the same field of endeavor, Ghoi discloses further comprising: assigning equipment at the given customer premises to operate under the given directory number (col. 9, lines 20-35).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to assign equipment at the given customer premises of Kim to operate under the given directory number as suggested by Ghoi because it would be easier to operate, more convenient and would relieve the users from having to memorize different numbers.

15. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Applicant's admitted prior art.

Regarding claim 10, Kim discloses the method of claim 1 (see above) wherein each local loop telephone line is operatively linked with a subscriber line interface circuit (page 15, 6th paragraph; note that Kim discloses that the control part perceives when, among other things, the telephones are off-hooked). Kim fails to disclose the method further comprising: carrying out the interfacing function, with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the customer premises to which the given local loop telephone line extends.

However, Applicant's admitted prior art discloses wherein each local loop telephone line is operatively linked with a respective subscriber line interface circuit (Fig. 1), the method further comprising: carrying out the interfacing function, with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the customer premises to which the given local loop telephone line extends (Fig. 1; Description of Related Art: page 3, lines 18-23).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to carry out the interfacing function of Kim with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the customer premises to which the given local loop telephone line extends as suggested by Applicant's admitted prior art.

One of ordinary skill in this art would have been motivated to carry out the interfacing function of Kim with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the customer premises to which the given local loop telephone line extends because the subscriber line interface circuit could sit at any point along the telephone line (Applicant's admitted prior art; page 3, lines 18-23).

Regarding claim 11, Kim discloses the method of claim 1 (see above) wherein each local loop telephone line is operatively linked with a subscriber line interface circuit (page 15, 6th paragraph; note that Kim discloses that the control part perceives when, among other things, the telephones are off-hooked). Kim fails to disclose wherein each local loop telephone line is operatively linked with a respective subscriber line interface circuit between the telephone

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company switch and the customer premises to which the local loop telephone line extends, the method further comprising: carrying out the interfacing function, with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the telephone company central office.

However, Applicant's admitted prior art discloses wherein each local loop telephone line is operatively linked with a respective subscriber line interface circuit between the telephone company switch and the customer premises to which the local loop telephone line extends (Fig. 1), the method further comprising: carrying out the interfacing function, with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the telephone company central office (Fig. 1; Description of Related Art: page 3, lines 18-23).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to carry out the interfacing function of Kim with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the telephone company central office as suggested by Applicant's admitted prior art.

One of ordinary skill in this art would have been motivated to carry out the interfacing function with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the telephone company central office because the subscriber line interface circuit could sit at any point along the telephone line (Applicant's admitted prior art; page 3, lines 18-23).

Regarding claim 12, Kim discloses the method of claim 1 (see above). Kim fails to disclose further comprising: carrying out the interfacing function, with respect to a given local loop telephone line, at a concentrator that sits between the telephone company switch and the customer premises to which the given local loop telephone line extends.

However, Applicant's admitted prior art discloses carrying out the interfacing function, with respect to a given local loop telephone line, at a concentrator that sits between the telephone company switch and the customer premises to which the given local loop telephone line extends (Fig. 2A; Description of Related Art: page 3, lines 2-4).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to carry out the interfacing function of Kim with respect to a given local loop telephone line, at a concentrator that sits between the telephone company switch and the customer premises to which the given local loop telephone line extends as suggested by Applicant's admitted prior art.

One of ordinary skill in this art would have been motivated to carry out the interfacing function with respect to a given local loop telephone line, at a concentrator that sits between the telephone company switch and the customer premises to which the given local loop telephone line extends because it can digitize voice communications coming from a customer premises and to combine the digitized voice communications with voice communications from other customer premises and vice versa for communications coming from the central office (Applicant's description of Prior Art Fig. 2A: page 11, lines 16-19).

Regarding claim 13, Kim discloses the method of claim 1 (see above). Kim fails to disclose further comprising: carrying out the interfacing function, with respect to a given local

loop telephone line, at a cable head-end between the telephone company switch and the customer premises to which the given local loop telephone line extends.

However, Applicant's admitted prior art discloses carrying out the interfacing function, with respect to a given local loop telephone line, at a cable head-end between the telephone company switch and the customer premises to which the given local loop telephone line extends (Fig. 2B: Description of Related Art: page 3, lines 5-7).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to carry out the interfacing function of Kim with respect to a given local loop telephone line, at a cable head-end between the telephone company switch and the customer premises to which the given local loop telephone line extends as suggested by Applicant's admitted prior art.

One of ordinary skill in this art would have been motivated to carry out the interfacing function with respect to a given local loop telephone line, at a cable head-end between the telephone company switch and the customer premises to which the given local loop telephone line extends because it allows the customer premises to receive telephone service over the same coaxial cable that delivers cable-television service to the premises (Applicant's description of Prior Art Fig. 2B: page 12, lines 2-3).

16. Claims 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Wu et al. (hereinafter "Wu"; Pub. No.: US 2003/0035525).

Regarding claim 22, Kim discloses a method comprising: providing multiple wireless communication devices at the first telecommunications company's central office (Fig. 1; reference numerals 10a-10n), each wireless communication device being configured to register

on the RAN (Fig. 1, reference numeral 300) and to place and receive calls on the transport network (Fig. 1, reference numeral 200) via the RAN (Fig. 1; page 12, last paragraph); and interfacing (Fig. 1, reference numerals 21-40) the multiple wireless communication devices (Fig. 1; reference numerals 10a-10n) with the local loop telephone lines at the first telecommunications company's facilities (Fig. 1; reference numeral 5), so as to concurrently extend multiple calls between the local loop telephone lines and the transport network via a communication path comprising the wireless communication devices and the RAN (Fig. 1; page 14, 2nd paragraph).

Kim fails to disclose it in a system comprising a first telecommunications company that operates a central office including a switch for communicatively connecting local loop telephone lines with a transport network, and a second telecommunications company that operates a radio access network (RAN) for communicatively connecting wireless communication devices with the transport network.

However, Wu discloses a first telecommunications company that operates facilities for communicatively connecting local loop telephone lines with a transport network, and a second telecommunications company that operates a radio access network (RAN) for communicatively connecting wireless communication devices with the transport network (page 1, paragraphs [0004] and [0006]-[0009]).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to incorporate the method of Kim in a system comprising a first telecommunications company that operates facilities for communicatively connecting local loop telephone lines with a transport network, and a second telecommunications company that

operates a radio access network (RAN) for communicatively connecting wireless communication devices with the transport network as suggested by Wu.

One of ordinary skill in this art would have been motivated to incorporate the method in a system comprising a first telecommunications company that operates facilities for communicatively connecting local loop telephone lines with a transport network, and a second telecommunications company that operates a radio access network (RAN) for communicatively connecting wireless communication devices with the transport network because users can select a wired or wireless company as the communication medium according to factors such as the telephone rate (Wu: page 1, paragraph [0004]).

Regarding claim 23, in the obvious combination, Kim discloses wherein the transport network comprises a public switched telephone network (Fig. 1, reference 200).

Regarding claim 24, in the obvious combination, Kim discloses wherein each of the wireless devices operates under a respective unique directory number in the RAN (page 13, 1st paragraph).

Regarding claim 25, Kim in combination with Wu fail to disclose further comprising: the second telecommunications company paying the first telecommunications company for access to the local loop telephone lines.

However, it would have been obvious to one of ordinary skill in this art at the time the invention was made to pay the first company for access to the local loop telephone lines since it was well-known in the art that agreements between wired and wireless companies are held in order for wireless customers to reach wired telephones.

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Regarding claim 26, in the obvious combination, Kim discloses wherein interfacing the multiple wireless communication devices with the local loop telephone lines at the first telecommunications company's facilities comprises: translating between (i) local loop signaling on the local loop telephone lines and (ii) RAN signaling communicated between the wireless communication devices and the RAN (Fig. 1; from page 14, 2nd paragraph through page 15, 1st paragraph; page 20, 1st paragraph).

Regarding claim 27, in the obvious combination, Kim discloses wherein interfacing the multiple wireless communication devices with the local loop telephone lines at the first telecommunications company's facilities further comprises: receiving outbound voice communications from the local loop telephone lines and passing the outbound voice communications to the wireless communication devices for transmission via the RAN to the transport network (Figs. 1 and 4; page 15, 4th paragraph); and receiving inbound voice communications that the wireless communication devices receive from the transport network via the RAN (Fig. 1; page 12, last paragraph), and passing the inbound voice communications to the local loop telephone lines (from page 14, last paragraph through page 15, 1st paragraph).

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marivelisse Santiago-Cordero whose telephone number is (571) 272-7839. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER